REMARKS

Claims 59-197 are in this application. Claims 59-197 correspond substantially to original claims 1-58.

The line spacing of the claims is 1.5.

In view of the retyped set of claims, the objection to claims 1-58 is obviated.

The Examiner has rejected claims 1, 4, 8 and 11 under 35 USC 112 second paragraph. Applicants respectfully traverse this rejection.

The Examiner has rejected claims 1, 4, 8 and 11 due to the use of "preferably" in the definition of Y and that there are two sentences in claim 1. In fact, "preferably" was used in the definition of R^1, not Y. New claims 59, 62, 66, 69, 167, 169, 171, 173 and 175 contain essentially the same subject matter as claims 1, 4, 8, 11, 32, 35, 37, 39 and 41. The preferred R_1 being -CH_2CH_2-, CH_2Y-, $CH_2CH_2CH_2$-, CH_2CH_2Y-, $CH_2CH_2CH_2CH_2$- and $CH_2CH_2CH_2Y$- where Y represents NH, O or S is the subject of new claims 189-197.

The Examiner states that claims 1-58 are ambiguous as it appears that in the definition of R_7 one of these rings is missing the terminal part. The Examiner's attention is drawn to the disclosure in original claim 1 and the corresponding disclosure in the specification on page 12 where it states that the R_7 moiety is linked either to two core molecules of the formula I to form a bis compound or the R_7 moiety has one of its linked bonds linked to the core of formula I and the second of its linked bonds is linked to a phenyl carboxylic acid or ester moiety thereof. Therefore both of the bonds of the cyclic R_7 are accounted for.

Therefore it is respectfully requested that this rejection be withdrawn.

The Examiner has rejected claims 1-58 under 35 USC 102 (e) as anticipated by or in the alternative under 35 USC 103 (a) as obvious over Ledoussal (U.S. Patent 6,329,391).

The Examiner has rejected claims 1-58 under 35 USC 102 (b) as anticipated or in the alternative under 35 USC 103 (a) as being obvious over Ito U.S. Patent 5,859,026.

The Examiner has rejected claims 1-58 under 35 USC 102 (b) as anticipated by or in the alternative under 35 USC 103 (a) as obvious over Miyake (U.S. Patent 5,889,009).

Claims 1-58 have been rejected as being anticipated by or in the alternative as being obvious over Haustein and Kurokawa.

Applicants respectfully traverse these rejections.

Claim 34 has been canceled and no corresponding claim has been added.

The last three compounds in claim 36 are deleted (now claim 170) and the choline, hydroxyethylpyrrolidine, diethanolamine and histidine salts of claim 40 have been deleted (now claim 174).

In claims 167, 169, 171 and 173 R^6 is defined as, C_{3-6} alkyl, F, Cl or amino.

The Examiner states that claims 1-58 are anticipated or obvious over US Patent 6,329,391 and that Ledoussal teaches that the compounds of formula I can be used with other active ingredients. Applicants respectfully disagree that Ledoussal teaches that the compounds of formula I can be used with other active ingredients. Ledoussal does not teach or suggest that the compounds of formula I are efflux pump inhibitors and does not teach use of a compound of formula I with an antimicrobial agent. In fact, Ledoussal teaches away from these compounds being efflux pump inhibitors at column 1, lines 33-35 where it states that the "quinolones act, at least in part, by inhibiting the synthesis of DNA, thus preventing the cell from replicating." This is supported by the disclosure in column 1, lines 40-58 of Ito (US patent 5,859,026) where it is stated that a problem with quinolone-type synthetic activity is the induction of chromosomal aberration.

It is not inherent from the disclosure of Ledoussal that the compounds in this application

are efflux pump inhibitors.

The Examiner states that claims 1-58 are anticipated or obvious over US Patent 5,859,026 (Ito). Applicants respectfully disagree that Ito teaches the claimed compounds can be used with other active ingredients. In addition, for the reasons stated above in reference to Ledoussal, it is not inherent that the compounds of Ito are efflux pump inhibitors.

The Examiner has rejected claims 1-58 as being anticipated by or obvious over Miyake.

Miyake teaches compounds that are useful as a prophylatic and/or therapeutic agentsfor peripheral arterial obstruction, acute myocardial infarction, or antitumor agents and as a prophylatic and/or therapeutic agent for osteoporosis.

Although in column 2, reference is made to WO93/13091 disclosing compounds with antibacterial activity, there is no suggestion that these compounds are efflux pump inhibitors or can be used with another antimicrobial agent. In fact, given the disclosure in column 1, lines 26-37 of Ledoussal of the possible mechanisms of antibacterials (inhibiting cell wall synthesis or repair; by altering cell wall permeability; by inhibiting protein synthesis; or by inhibiting synthesis of nucleic acids), one skilled in the art would consider that the compounds do not have efflux pump activity.

The Examiner has rejected claims 1-58 as being anticipated or obvious over Haustein and Kurokawa.

Haustein teaches that nadifloxacin is an antibacterial agent. In column 2 on page 91 and on page 92, it is stated that nadifloxacin is a gyrase inhibitor.

There is no disclosure or suggestion in Kurokawa of the mechanism of action. Given the discussions in the other references cited by the Examiner of possible mechanisms of action none of which are efflux pump inhibitors it is not inherent that the compounds are efflux pump inhibitors. In addition, neither of references teaches or suggests the use of an antimicrobial agent and an efflux pump inhibitor.

Claim 59 (formerly claim 1) claims a method for treating a microbial infection in an animal wherein the efflux pump inhibitor is administered in an amount sufficient to reduce efflux pump activity.

Claim 62 (formerly claim 4) claims a method for prophylatic treatment wherein the efflux pump inhibitor is administered in an amount sufficient to reduce efflux pump activity.

None of the cited references disclose or suggest administration of compounds in an amount that may be sufficient to reduce efflux pump activity but would not be sufficient to kill or inhibit the replication of the infection causing microorganism.

Claim 66 (formerly claim 8) defines a method of enhancing the antimicrobial activity of an antimicrobial agent comprising contacting said microbe with said antimicrobial agent and an efflux pump inhibitor in an amount effective to inhibit the efflux pump in said microbe.

None of the cited references disclose or suggest that the activity of an antimicrobial can be enhanced by administering an efflux pump inhibitor.

Claim 69 (formerly claim 11) claims a method of suppressing growth of a microbe expressing an efflux pump comprising contacting said microbe with an efflux pump inhibitor in the presence of a concentration of antimicrobial agent below the MIC of said microbe.

None of the cited references disclose or suggest suppressing growth of a microbe in the presence of a concentration of antimicrobial agent below the MIC of said microbial. Since the cited references teach antimicrobial effects, any antimicrobial administered according to these references must be administered in an concentration above the MIC of the antimicrobial.

Therefore, it is respectfully requested that the rejections be withdrawn.

Applicants submit that the present application is in condition for allowance and favorable consideration is respectfully requested.

Respectfully submitted,

JANET I. CORD
LADAS & PARRY
26 West 61st. Street
New York, New York 10023
Reg. 33,778
Tel. (212) 708-1935